REMARKS/ARGUMENTS

Claims 1-38 are pending in the application. The Examiner has rejected claims 1-38. Applicant respectfully requests reconsideration of claims 1-38.

In the Examiner's Response to Arguments, regarding claims 1 and 20, the Examiner states as follows:

> Regarding Claims 1 and 20, Applicant states "none of the cited portions of the cited references appear to teach or suggest, for example, "Layer-3 control information." Examiner respectfully disagrees. Examiner notes that Applicant has not specifically pointed out how the language of the claims patentably distinguishes them from the references. Examiner turns to Applicant's specification at paragraph 0004, which defines the OSI 7-layer model. More specifically, the network layer is defined as Layer-3. Examiner further turns to The OSI Reference Model, which was provided to Applicant with the Office Action mailed June 5, 2009, wherein Layer-3 (i.e., the Network Layer) corresponds to the Internet Protocol (IP). Turning to the McDysan reference, paragraph 0009 recites: "Diffsery is an IP QoS architecture that achieves scalability by conveying an aggregate traffic classification within a DS field (e.g., the IPv4 Type of Service (TOS) byte or IPv6 traffic class byte) of each IP-layer packet header. The first six bits of the DS field encode a Diffsery Code Point (DSCP) that requests a specific class of service or Per Hop Behavior (PHB) for the packet at each node along its path within a Diffsery domain.." Examiner further notes that the claimed "control information" is not further defined in the claim language so as to require a structure or feature of said information other than being "Layer-3 control information." As the DSCP disclosed in McDysan controls the QoS applied to a packet (e.g., in paragraphs 0037 and 0042) and further is indicative of an IP QoS (i.e., Layer-3), Examiner submits that the claim limitation "Layer-3 control information" is met by the disclosure of McDysan. Applicant further states paragraph 0042 of McDysan "fails to disclose or suggest, and teaches away from "marking packets carrying the Layer-3 control information."
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> Examiner respectfully disagrees. Examiner notes that while alleging that the disclosure of McDysan teaches away from marking packets, Applicant has not specifically pointed out how the disclosure teaches away or how the language of the claims patentably distinguishes them from the references. As described above, McDysan discloses marking packets via a DSCP code point in IP packets, and therefore meets the claim limitation "marking packets carrying the Layer-3 control information."

Applicant notes the Examiner alleges "...McDysan discloses marking packets via a DSCP code point in IP packets, and therefore meets the claim limitation 'marking packets carrying the Layer-3 control information.'" However, Applicant notes the Examiner also alleges, "As the DSCP disclosed in McDysan controls the QoS applied to a packet (e.g., in paragraphs 0037 and 0042) and further is indicative of an IP QoS (i.e., Layer-3), Examiner submits that the claims limitation "Layer-3 control information" is met by the disclosure of McDysan." However, if the Examiner is alleging that "the DSCP disclosed in McDysan" is the basis for the Examiner's contention "that the claims limitation 'Layer-3 control information' is met by the disclosure of McDysan," then Applicant submits the Examiner has not shown any portion of the cited references to disclose or suggest "...marking packets

carrying the Layer-3 control information." However, if the Examiner is alleging that "...McDysan discloses marking packets via a DSCP code point in IP packets...," then Applicant submits the Examiner has not shown any portion of the cited references to disclose or suggest "...packets carrying the Layer-3 control information." Thus, Applicant submits the Examiner has not shown any portion of the cited references to disclose or suggest, for example, "...marking packets carrying the Layer-3 control information."

As another example, Applicant submits the Examiner has not alleged teaching as to "...encapsulating the packets at Layer-2 to uniquely identify Layer-2 frames as carrying trusted control information." While the Examiner cites "(paragraph 0215, Figure 25, wherein a packet containing L2TP is encapsulated with a PPP or Ethernet header)" and alleges teaching as to "...an implementation of 'Layer 2' of the OSI 7-layer Interconnect Model (i.e., the data link layer)," Applicant submits the Examiner does not allege teaching of "...to uniquely identify Layer-2 frames as carrying trusted control information." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to the subject matter of claims 1 or 20. Therefore, Applicant submits claims 1 and 20 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 2 and 21, the Examiner states as follows:

> Regarding Claims 2 and 21, Applicant states "Examiner does not explain how the Examiner considers "a three bit differentiated services code point value ... to be a "unique protocol identifier." Examiner respectfully disagrees. Examiner notes that the DSCP value disclosed in McDysan uniquely identifies how the packet is to be treated (e.g., binary value of 000 indicating the packet is to be treated as best-effort in paragraph 0042).

Applicant notes paragraph [0042] states, in relevant part, "...DSCP 000, thus identifying the packets as best-effort traffic." Thus, Applicant submits the "DSCP 000" does not disclose or suggest a "unique protocol identifier." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 2 and 21. Therefore, Applicant submits claims 2 and 21 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 4 and 23, the Examiner states as follows:

Regarding Claims 4 and 23, Applicant states "the alleged teaching of "to send values to a packet marker" does not teach or suggest "...to determine when marking of control packets is to be done." Examiner respectfully disagrees. Examiner notes that Applicant has not specifically pointed out how the language of the claims patentably distinguishes them from the references. McDysan, at Figure 5 and paragraph 0036, discloses a classifier in the LAN port determining, via by reference to a classifier table indexed by multiple indices (e.g., source port and destination port), to determine an interface for communication and to send values to a packet marker. Further, at paragraphs 0037 and 0042, a determination is made with regard to marking of a packet (e.g., marking a packet when received from an access network).

Applicant submits none of the portions of the cited references appear to teach or suggest "to determine when marking of control packets is to be done." Rather, Applicant submits "...classifier 124 of LP-2 110b directs all packets to marker M0 in accordance with classifier table 126" and "Marker M0 remarks all packets received at LP-2 110b with DSCP 000, thus identifying the packets as best-effort traffic" of paragraph [0042] teach away from "determine when marking of control packets is to be done," as they teach remarking of all received packets indiscriminately. Also, Applicant notes the Examiner alleges teaching only as to "...marking of a packet...," not "...marking of control packets...." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 4 and 23. Therefore, Applicant submits claims 4 and 23 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 17 and 36, the Examiner states as follows:

Regarding Claims 17 and 36, Applicant states "the cited portions of the cited reference do not appear to disclose, as an example, according to control encapsulation." Examiner respectfully disagrees. Examiner notes that Applicant has not specifically pointed out how the language of the claims patentably distinguishes them from the references. Further, Examiner notes that the claimed "control encapsulation" is not further defined in the claim language so as to require a certain format for the encapsulation. As such, Examiner gives the claim language its broadest reasonable interpretation without unnecessarily importing limitations from the specification. Oguchi discloses encapsulating an L2TP VPN packet (i.e., performing control encapsulation) comprising Layer 3 encapsulation (paragraph 0215, Figure 25, wherein a packet containing an IP header).

While the Examiner states "'control encapsulation' is not further defined in the claim language so as to require a certain format for the encapsulation," Applicant submits the Examiner has not offered any explanation as to how "encapsulating an L2TP VPN packet" discloses or suggests "control encapsulation." Rather, the Examiner parenthetically states, "(i.e., performing control encapsulation)" without any explanation or justification. Moreover, Applicant submits paragraph [0215], as cited by the Examiner, merely states "It is to be noted that the present embodiment has dealt with the case where the L2TP tunneling is used as a tunneling technique" and "The format of the encapsulated

packet transmitted through the L2TP tunnel in such case is the same as that shown in FIG. 25."

Applicant submits such teaching fails to disclose or suggest "control encapsulation." Accordingly,

Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 17

and 36. Therefore, Applicant submits claims 17 and 36 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 3 and 22, the Examiner states as

follows:

> Regarding Claims 3 and 22, Applicant states ""to allow a node in a communications network to
> collect traffic information and perform load sharing depending on traffic conditions"...would not
> have motivated one of ordinary skill in the art to combine the alleged teachings of the cited portions
> of the cited references." Examiner respectfully disagrees. Examiner submits recognizes that
> obviousness may be established by combining or modifying the teachings of the prior art to produce
> the claimed invention where there is some teaching, suggestion, or motivation to do so found either
> in the references themselves or in the knowledge generally available to one of ordinary skill in the
> art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), In re Jones, 958 F.2d 347,21
> USPQ2d 1941 (Fed. Cir. 1992), and KSR International Co. v. Teleflex, Inc., 550 U.S. 398, 82
> USPQ2d 1385 (2007). In this case, Nakamichi discloses, at paragraph 0012, a need to allow a node
> in a communication network to collect traffic information to thereby achieve load sharing depending
> on the conditions of the traffic. Therefore, Examiner notes that the references themselves provide a
> motivation to combine the disclosed teachings.

Applicant submits the Examiner has not shown how an alleged motivation of "a need to allow a

node in a communication network to collect traffic information to thereby achieve load sharing

depending on the conditions of the traffic" would have motivated one of ordinary skill in the art to

combine the teachings of Nakamichi, directed to a device and method for collecting traffic

information, with the teachings of McDysan, directed to a VPN-aware CPE edge router, and the

teachings of Oguchi, directed to the establishment of virtual links between all of the relaying

apparatuses belonging to a multicast address group, to allegedly yield marking packets carrying Layer-

3 control information using a link-local MPLS label and encapsulating the packets at Layer-2 to

uniquely identify Layer-2 frames as carrying trusted control information. Accordingly, Applicant

submits the Examiner has not made a *prima facie* showing of obviousness as to claims 3 and 22.

Therefore, Applicant submits claims 3 and 22 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 5 and 24, the Examiner states as

follows:

> Regarding Claims 5 and 24, Applicant states that "Figure 1" does not appear to disclose "interface
> group defined between interfaces 'a' and 'd' within network device A." Examiner respectfully

disagrees. Claims 5 and 24 require "applying interface groups to packet communications within a particular interface group." However, Examiner notes that the claim language is not further defined so as to further limit the step of applying interface groups or the features of a particular interface group. Per MPEP 2106: "USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320,1322 (Fed. Cir. 1989)." Examiner has given said claim language its broadest reasonable interpretation in view of the specification to comprise determination of an interface for communications. Accordingly, Yu discloses assigning interfaces to communicate within and between various types of networks (see Figures 1 and 4 and paragraphs 0022 and 0025). Further regarding Claims 5 and 24, Yu discloses packet communications between interfaces 'a' and `d' of Network Device A in Figure 1 (at paragraph 0034, wherein tunnel interface 'd' is assigned to physical interface 'a' within an interface group).

Applicant notes the Examiner does not appear to allege "applying interface groups..." Rather, Applicant notes the Examiner alleges, "Yu discloses assigning interfaces to communicate within and between various types of networks." Moreover, while paragraph [0034] of Yu states, "...define an interface group...," Applicant submits paragraph [0034] teaches doing so to "cause network device A to instruct network device B to assume mastership of the virtual IP address associated with the private physical interface 'a' of network device A, which will, in turn, cause network device B to assume mastership for that interface." Applicant submits the cited portion of the Yu reference does not teach or suggest "applying interface groups to determine when marking of control packets is to be done," comprising "applying interface groups to packet communications within a particular interface group," as Applicant submits instructing devices to assume mastership of a virtual IP address teaches away from "applying interface groups to determine when marking of control packets is to be done." Moreover, Applicant submits the Examiner has not shown how an alleged motivation of "to withstand failures of network device components, without triggering unnecessary failover in a network device" would have motivated one of ordinary skill in the art to combine the teachings of Yu, directed to a method and apparatus for defining failover events in a network device, with the teachings of McDysan, directed to a VPN-aware CPE edge router, and the teachings of Oguchi, directed to the establishment of virtual links between all of the relaying apparatuses belonging to a multicast address group, to allegedly yield applying interface groups to packet communications within a particular interface group to determine when marking of control packets is to be done, marking packets carrying Layer-3 control information, and encapsulating the packets at Layer-2 to uniquely identify Layer-2 frames as carrying trusted control information. Accordingly, Applicant submits the Examiner has not made a *prima facie*

showing of obviousness as to claims 5 and 24. Therefore, Applicant submits claims 5 and 24 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 6 and 25, the Examiner states as follows:

> Regarding Claims 6 and 25, Applicant states that "the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest, as an example, "...the step of. applying interface groups to packet communications within a backbone interface group." Examiner respectfully disagrees. Figure 4 of Yu discloses setting up a static tunnel (i.e., "Static Tunnel A") across the Internet (i.e., backbone) between two network devices. Given its broadest reasonable interpretation, the claimed "backbone interface group" limitation is met by interface 'd', which connects Network Device A. to the tunnel over the Internet.

Applicant notes the Examiner parenthetically characterizes "the Internet" as teaching "(i.e., backbone)," without citing any reference or providing any justification or explanation as to such characterization. Moreover, Applicant submits Figure 4 of Yu, as cited by the Examiner, does not appear to disclose "applying interface groups...." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 6 and 25. Therefore, Applicant submits claims 6 and 25 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 7 and 26, the Examiner states as follows:

> Regarding Claims 7 and 26, Applicant states that "the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest, as an example, "...the step of: applying interface groups to packet communications within a customer-specific interface group." Examiner respectfully disagrees. Yu discloses communications with assigning interface 'a' to interconnect with a Host PC (i.e., customer-specific interface group given its broadest reasonable interpretation) in Figure 4.

Applicant submits Figure 4 of Yu, as cited by the Examiner, does not appear to disclose "applying interface groups...." Moreover, Applicant submits the Examiner does not appear to allege teaching as to "applying interface groups to packet communications within a customer-specific interface group." Rather, the Examiner alleges, "Yu discloses...assigning interface 'a' to interconnect with a Host PC." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 7 and 26. Therefore, Applicant submits claims 7 and 26 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 8 and 27, the Examiner states as follows:

> Regarding Claims 8 and 27, Applicant states that "the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest, as an example, "...the step of: applying interface groups to packet communications within a peer interface group." Yu discloses communications via a static tunnel between Network Device A and Network Device D (i.e., peer devices given its broadest reasonable interpretation) via interface 'a' on Network Device A (see Figure 4). Given its broadest reasonable interpretation, the claimed "peer interface group" limitation is met by the disclosed interface assignment (i.e., interface 'd') used in order to communicate between like devices (i.e., Network Device A and Network Device D).

Applicant submits Figure 4 of the Yu reference does not disclose or suggest "communications via a static tunnel between Network Device A and Network Device D (i.e., peer devices given its broadest reasonable interpretation) via interface 'a' on Network Device A (see Figure 4)," as alleged by the Examiner. Moreover, Applicant submits Figure 4 of the Yu reference does not disclose or suggest "(i.e., interface 'd') used in order to communicate between like devices (i.e., Network Device A and Network Device D)." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 8 and 27. Therefore, Applicant submits claims 8 and 27 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 9 and 28, the Examiner states as follows:

> Regarding Claims 9 and 28, Applicant states that "the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest, as an example, "...the step of: applying interface groups to packet communications between interface groups." Examiner respectfully disagrees.
>
> As stated above, Examiner has given the claim language "applying interface groups" its broadest reasonable interpretation in view of the specification to comprise determination of an interface for communications. Yu discloses applying interface groups to packet communications between interface groups (Figure 4, connections between peer (e.g., between Network Device A and Network Device D), backbone (e.g., in Network Device A between interfaces 'a' and `d', and customer networks (e.g., between Network Device A at interface 'a' and Host PC 12).

Applicant submits paragraph [0034] of the Yu reference appears to teach away from the Examiner's assertion that "Examiner has given the claim language 'applying interface groups' its broadest reasonable interpretation in view of the specification to comprise determination of an interface for communications." Applicant submits Yu's usage of "...define an interface group..." in paragraph [0034] is narrower than the Examiner's alleged "broadest reasonable interpretation." Thus, Applicant submits one of ordinary skill in the art at the time the invention was made, in view of the Yu

reference, would not have understood "...define an interface group..." to merely mean "determination of an interface for communications," as alleged by the Examiner. Moreover, Applicant submits Figure 4 of the Yu reference, as cited by the Examiner, does not disclose or suggest "applying interface groups to packet communications between interface groups." Furthermore, Applicant submits paragraph [0034] of the Yu reference does not disclose or suggest "applying interface groups to packet communications between interface groups (Figure 4, connections between peer (e.g., between Network Device A and Network Device D), backbone (e.g., in Network Device A between interfaces 'a' and `d', and customer networks (e.g., between Network Device A at interface 'a' and Host PC 12)." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 9 and 28. Therefore, Applicant submits claims 9 and 28 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 10 and 29, the Examiner states as follows:

> Regarding Claims 10 and 29, Applicant states that "the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest, as an example, "...the step of: applying interface groups to packet communications between backbone and customer-specific interface groups." Examiner respectfully disagrees. Yu further discloses applying interface groups to packet communications between backbone and customer-specific groups (Figure 4, connections between backbone (e.g., in Network Device A between interfaces 'a' and `d' and customer networks (e.g., between Network Device A at interface 'a' and Host PC 12).

Applicant submits Figure 4 of the Yu reference does not disclose or suggest "applying interface groups to packet communications between backbone and customer-specific groups (Figure 4, connections between backbone (e.g., in Network Device A between interfaces 'a' and `d' and customer networks (e.g., between Network Device A at interface 'a' and Host PC 12)." Applicant notes paragraph [0034] of the Yu reference recites "...define an interface group containing the tunnel interface 'd.'" However, Applicant submits Yu teaches away from "applying interface groups" to "connections between backbone (e.g., in Network Device A between interfaces 'a' and `d' and customer networks (e.g., between Network Device A at interface 'a' and Host PC 12)," as Applicant submits such an alleged "applying interface groups" would appear to render inoperable the "tunnel fail over...without running a dynamic routing protocol" described in paragraph [0034] of the Yu reference. Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 10 and 29. Therefore, Applicant submits claims 10 and 29 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 11 and 30, the Examiner states as follows:

> Regarding Claims 11 and 30, Applicant states that "the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest, as an example, "...the step of. applying interface groups to packet communications between customer-specific and peer interface groups." Examiner respectfully disagrees. Yu discloses applying interface groups to packet communications between customer-specific and peer interface groups (Figure 4, connections between peer (e.g., between Network Device A and Network Device D) and customer networks (e.g., between Network Device A at interface 'a' and Host PC 12).

Applicant submits Figure 4 of the Yu reference does not disclose or suggest "applying interface groups to packet communications between customer-specific and peer interface groups (Figure 4, connections between peer (e.g., between Network Device A and Network Device D) and customer networks (e.g., between Network Device A at interface 'a' and Host PC 12)." Applicant notes paragraph [0034] of the Yu reference recites "...define an interface group containing the tunnel interface 'd.'" However, Applicant submits Yu teaches away from "applying interface groups" to "connections between peer (e.g., between Network Device A and Network Device D) and customer networks (e.g., between Network Device A at interface 'a' and Host PC 12)," as Applicant submits such an alleged "applying interface groups" would appear to render inoperable the "tunnel fail over...without running a dynamic routing protocol" described in paragraph [0034] of the Yu reference. Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 11 and 30. Therefore, Applicant submits claims 11 and 30 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 12 and 31, the Examiner states as follows:

> Regarding Claims 12 and 31, Applicant states that "the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest, as an example, "...the step of: applying interface groups to packet communications between backbone and peer interface groups." Examiner respectfully disagrees. Yu discloses applying interface groups to packet communications between interface groups (Figure 4, connections between peer (e.g., between Network Device A and Network Device D) and backbone (e.g., in Network Device A between interfaces 'a' and 'd').

Applicant notes, in the Examiner's Response to Arguments with respect to claims 6 and 25, the Examiner parenthetically characterizes "the Internet" as teaching "(i.e., backbone)," without citing any reference or providing any justification or explanation as to such characterization. Now, with respect to claims 12 and 31, Applicant notes the Examiner parenthetically characterizes "(e.g., in Network Device A between interfaces 'a' and 'd')" as teaching a "backbone." Thus, Applicant submits the

Examiner's assertions are inconsistent and contradictory. Applicant submits Figure 4 of the Yu reference does not disclose or suggest "applying interface groups to packet communications between backbone and peer interface groups." Applicant notes paragraph [0034] of the Yu reference recites "...define an interface group containing the tunnel interface 'd.'" However, Applicant submits Yu teaches away from "applying interface groups" to "connections between peer (e.g., between Network Device A and Network Device D) and backbone (e.g., in Network Device A between interfaces 'a' and 'd'," as Applicant submits such an alleged "applying interface groups" would appear to render inoperable the "tunnel fail over...without running a dynamic routing protocol" described in paragraph [0034] of the Yu reference. Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 12 and 31. Therefore, Applicant submits claims 12 and 31 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 13 and 32, the Examiner states as follows:

> Regarding Claims 13 and 32, Applicant states "even if an attempt were made to combine the teachings of the Holden reference and the McDysan reference, such an attempted combination would not yield the subject matter of Claims 13 and 32." Examiner respectfully disagrees. Per MPEP 2143.01: "The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they arc in analogous arts." The McDysan, Oguchi, and Holden references are directed to processing data packets and are therefore in analogous arts. Holden further discloses a secure network interface unit (SNIU) that marks the protocol and type fields to indicate an ICMP Echo Reply, signs the packet, and sends through an interface (column 20, line 66 - column 21, line 10).

Applicant notes the Examiner alleges "Holden further discloses a secure network interface unit (SNIU) that marks the protocol and type fields to indicate an ICMP Echo Reply." Thus, Applicant submits the Examiner appears to characterize the teachings of Holden in a manner that teaches away from the subject matter of claims 13 and 32. Applicant notes claims 13 and 32 depend indirectly from claims 1 and 20, which recite "marking packets carrying the Layer-3 control information," while the Examiner alleges teaching as to marking "an ICMP Echo Reply." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 13 and 32. Therefore, Applicant submits claims 13 and 32 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 14 and 33, the Examiner states as follows:

> Regarding Claims 14 and 33, Applicant states "even if an attempt were made to combine the teachings of the Pan reference and the McDysan reference, such an attempted combination would not yield the subject matter of Claims 14 and 33." Examiner respectfully disagrees. Per MPEP 2143.01: "The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts." The McDysan, Oguchi, and Pan references are directed to processing data packets and are therefore in analogous arts. With regards to the claim limitation "applying interface groups to communication of ping packets," Pan discloses assigning predetermined port numbers to LSP ping messages (column 14, lines 4855).

Applicant submits "assigning predetermined port numbers to LSP ping messages" fails to disclose or suggest applying interface groups to determine when marking of control packets is to be done, wherein applying interface groups to determine when marking of control packets is to be done comprises applying interface groups to communication of ping packets, and marking packets carrying Layer-3 control information, as "assigning predetermined port numbers to LSP ping messages" does not teach or suggest "to determine when marking of control packets is to be done." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 14 and 33. Therefore, Applicant submits claims 14 and 33 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 15 and 34, the Examiner states as follows:

> Regarding Claims 15 and 34, Applicant states "even if an attempt were made to combine the teachings of the Fotedar reference and the McDysan reference, such an attempted combination would not yield the subject matter of Claims 15 and 34." Examiner respectfully disagrees. Per MPEP 2143.01: "The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts." The McDysan, Oguchi, and Fotedar references are directed to processing data packets and are therefore in analogous arts. Further, Fotedar discloses assignment of traceroute packets to a virtual router address indicative of a loopback interface (paragraph 0011).

Applicant submits "assignment of traceroute packets to a virtual router address indicative of a loopback interface" fails to disclose or suggest applying interface groups to determine when marking of control packets is to be done, wherein applying interface groups to determine when marking of control packets is to be done comprises applying interface groups to communication of traceroute packets, and marking packets carrying Layer-3 control information, as "assignment of traceroute packets to a virtual router address indicative of a loopback interface" does not teach or suggest "to

determine when marking of control packets is to be done." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 15 and 34. Therefore, Applicant submits claims 15 and 34 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 16 and 35, the Examiner states as follows:

> Regarding Claims 16 and 35, Applicant states "even if an attempt were made to combine the teachings of the Tuomenoksa reference and the McDysan reference, such an attempted combination would not yield the subject matter of Claims 16 and 35." Examiner respectfully disagrees. Per MPEP 2143.01: "The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts." The McDysan, Oguchi, and Tuomenoksa references are directed to processing data packets and are therefore in analogous arts. Further, Tuomenoksa discloses setting up a tunnel interface with a NOC (paragraph 0136) and communicating packets, including control information, with the NOC via the tunnel (paragraphs 0141-0143).

Applicant submits "setting up a tunnel interface with a NOC (paragraph 0136) and communicating packets, including control information, with the NOC via the tunnel (paragraphs 0141-0143)" fails to disclose or suggest applying interface groups to determine when marking of control packets is to be done, wherein applying interface groups to determine when marking of control packets is to be done comprises applying interface groups to communication of packets from Network Operations Center (NOC) hosts, and marking packets carrying Layer-3 control information, as "setting up a tunnel interface with a NOC (paragraph 0136) and communicating packets, including control information, with the NOC via the tunnel (paragraphs 0141-0143)" does not teach or suggest "to determine when marking of control packets is to be done." Moreover, Applicant submits "setting up a tunnel interface with a NOC" does not disclose or suggest "applying interface groups to communication of packets from Network Operations Center (NOC) hosts." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 16 and 35. Therefore, Applicant submits claims 16 and 35 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 18 and 37, the Examiner states as follows:

> Regarding Claims 18 and 37, Applicant states that the cited portions of the cited references do not disclose "control packets." Applicant further states "even if an attempt were made to combine the teachings of the Johansson reference and the McDysan reference, such an attempted combination would not yield the subject matter of Claims 18 and 37." Examiner respectfully disagrees. The claim

language "control packets" is not further defined in the claim language so as to further limit the content or structure of the claimed "control packet." As such, Examiner has given the claim term its broadest reasonable interpretation without unnecessarily importing limitations from the specification and interpreted "control packet" to comprise any messaging related to control of communications (e.g., setup, teardown, parameter management, etc.). Further, per MPEP 2143.01: "The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts." The McDysan, Oguchi, and Johansson references are directed to processing data packets and are therefore in analogous arts." While McDysan discloses processing control information in a network (paragraphs 0037 and 0042), the combination of McDysan and Oguchi does not disclose processing the control packets at a line rate. In the same field of endeavor, Figure 4a, step 410 of Johansson "determines when a predetermined number Input RateLimit of Cells are received" (column 10, lines 45-47). As such, Johansson provides a general teaching of a rate-limited queue receiving packets.

Applicant submits the Examiner does not appear to allege any teaching or suggestion as to, for example, "unmarked control packets." Rather, Applicant notes, with respect to claims 1 and 20, from which claims 18 and 37 depend, the Examiner alleges "...McDysan discloses marking packets via a DSCP code point in IP packet...." Thus, Applicant submits the combination of references cited by the Examiner appear to teach away from "unmarked control packets." Moreover, Applicant submits the "cells" of Johansson fail to disclose or suggest "unmarked control packets." Accordingly, Applicant submits the Examiner has not made a *prima facie* showing of obviousness as to claims 18 and 37 Therefore, Applicant submits claims 18 and 37 are in condition for allowance.

In the Examiner's Response to Arguments, regarding claims 19 and 38, the Examiner states as follows:

> Regarding Claims 19 and 38, Applicant states "even if an attempt were made to combine the teachings of the Johansson reference and the McDysan reference, such an attempted combination would not yield the subject matter of Claims 19 and 38." Examiner notes that the Johanson reference is not relied upon for rejection of Claims 19 and 38 under 35 U.S.C. 103(a). Per MPEP 2143.01: "The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts." The McDysan, Oguchi, and Hussey references are directed to processing data packets and are therefore in analogous arts. Further, Hussey discloses a processor pool aggregation technique wherein a communication device "receives a packet data stream via the communication network ... at a line rate that might otherwise overwhelm the processing capabilities of the NIC ... and result in dropped packets and reduced quality of service" (paragraph 0050).

Regarding claims 19 and 38, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 19 and 38. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "receiving the packets as received packets; and processing the received packets at a line rate." While the Examiner cites "(paragraph 0050)" of the

Hussey reference, Applicant submits "(paragraph 0050)" of the Hussey reference states, in part, "...receives a packet data stream via the communication network 110 at a line rate...." Applicant submits such teaching does not disclose or suggest "receiving the packets as received packets" and "processing the received packets at a line rate." Moreover, Applicant has presented arguments as to McDysan not disclosing the subject matter of claims from which claims 19 and 38 depend. Accordingly, even if an attempt were made to combine the teachings of the Hussey reference and the McDysan reference, such an attempted combination would not yield the subject matter of claims 19 and 38. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 19 and 38. Therefore, Applicant submits claims 19 and 38 are in condition for allowance.

The Examiner has rejected claims 1, 2, 4, 17, 20, 21, 23 and 36 under 35 U.S.C. § 103(a) as allegedly being unpatentable over McDysan et al. (U.S. Patent Application Publication 2003/0112755 A1) in view of Oguchi et al. (U.S. Patent Publication No. US 2002/0067725 A1). Applicant respectfully disagrees.

Regarding claim 1, Applicant submits the cited portions of the cited references do not render obvious the subject matter of claim 1. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "marking packets carrying the Layer-3 control information." While the Examiner states, "McDysan discloses marking packets carrying Layer-3 control information (paragraphs 0037 and 0042, wherein packets are marked with a differentiated services code point (DSCP) value)," Applicant submits none of the cited portions of the cited references appear to teach or suggest, for example, "Layer-3 control information." Moreover, Applicant submits the Examiner's allegation of "which is known in the art as an implementation of 'Layer-3' in the OSI 7-layer Interconnect Model (i.e., the network layer)" does not appear to allege teaching as to, for example, "Layer-3 control information." Moreover, it isn't clear what noun or noun phrase the Examiner is using the word "which" to refer back to in alleging "which is known in the art as an implementation of 'Layer-3' in the OSI 7-layer Interconnect Model (i.e., the network layer)." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claim 1.

Also, Applicant notes paragraph [0042] of the McDysan (US 2003/0112755 A1) reference states, in part, "Marker M0 remarks all packets received at LP-2 110b with DSCP 0000, thus identifying the packets as best-effort traffic." Applicant submits "Marker M0 remarks all packets

received..." fails to disclose or suggest, and teaches away from, "marking packets carrying the Layer-3 control information." Therefore, Applicant submits claim 1 is in condition for allowance.

Regarding claim 2, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claim 2. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "...wherein the step of marking further comprises: marking the packets using a unique protocol identifier." While the Examiner cites "(paragraph 0037 and 0042, wherein packets are marked with a three bit differentiated services code point (DSCP) value (e.g., 000, 010, and 101)," Applicant submits the Examiner does not explain how the Examiner considers "a three bit differentiated services code point (DSCP) value (e.g., 000, 010, and 101)" to be "a unique protocol identifier." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claim 2. Therefore, Applicant submits claim 2 is in condition for allowance.

Regarding claim 4, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claim 4. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "applying interface groups to determine when marking of control packets is to be done." While the Examiner cites "(Figure 5 and paragraph 0036, wherein the classifier in the LAN port determines by reference to a classifier table indexed by multiple indices, such as source port and destination port, to determine an interface for communication and to send values to a packet marker)," Applicant submits the alleged teaching of "to send values to a packet marker" does not teach or suggest "...to determine when marking of control packets is to be done." Applicant submits the cited portions of the cited reference do not disclose or suggest "...to determine when marking of control packets is to be done." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claim 4. Therefore, Applicant submits claim 4 is in condition for allowance.

Regarding claims 17, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claim 17. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of encapsulating the packets further comprises: encapsulating the packets according to control encapsulation." While the Examiner cites "(paragraph 0215, Figure 25, wherein a packet containing an IP header)" in the Oguchi reference, Applicant submits the cited portions of the cited reference do not appear to disclose, as an example, "...according to control encapsulation." Thus, Applicant submits the Examiner has not made a *prima*

facie showing of obviousness with respect to claim 17. Therefore, Applicant submits claim 17 is in condition for allowance.

Regarding claims 20, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claim 20. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "marking packets carrying the Layer-3 control information." While the Examiner states, "McDysan discloses apparatus comprising a network element (Figure 5, CPE edge router 34 comprising LAN physical ports (60a-60n) and WAN physical ports 64a-64n that further comprise packet classifiers 80 (LAN) and 100 (WAN)) that marks packets carrying Layer-3 control information (paragraphs 0037 and 0042, wherein packets are marked with a differentiated services code point (DSCP) value)," Applicant submits none of the cited portions of the cited references appear to teach or suggest, for example, "Layer-3 control information." Moreover, Applicant submits the Examiner's allegation of "which is known in the art as an implementation of 'Layer-3' in the OSI 7-layer Interconnect Model (i.e., the network layer)" does not appear to allege teaching as to, for example, "Layer-3 control information." Moreover, it isn't clear what noun or noun phrase the Examiner is using the word "which" to refer back to in alleging "which is known in the art as an implementation of 'Layer-3' in the OSI 7-layer Interconnect Model (i.e., the network layer)." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claim 20.

Also, Applicant notes paragraph [0042] of the McDysan (US 2003/0112755 A1) reference states, in part, "Marker M0 remarks all packets received at LP-2 110b with DSCP 0000, thus identifying the packets as best-effort traffic." Applicant submits "Marker M0 remarks all packets received..." fails to disclose or suggest, and teaches away from, "marking packets carrying the Layer-3 control information." Therefore, Applicant submits claim 20 is in condition for allowance.

Regarding claims 21, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claim 21. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of marking further comprises: marking the packets using a unique protocol identifier." While the Examiner cites "(paragraph 0037 and 0042, wherein packets are marked with a three bit differentiated services code point (DSCP) value (e.g., 000, 010, and 101)," Applicant submits the Examiner does not explain how the Examiner considers "a three bit differentiated services code point (DSCP) value (e.g., 000, 010, and 101)" to be "a unique protocol

identifier." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claim 21. Therefore, Applicant submits claim 21 is in condition for allowance.

Regarding claims 23, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claim 23. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "...wherein the network element is further adapted to perform the step of: applying interface groups to determine when marking of control packets is to be done." While the Examiner cites "(Figure 5 and paragraph 0036, wherein the classifier in the LAN port determines by reference to a classifier table indexed by multiple indices, such as source port and destination port, to determine an interface for communication and to send values to a packet marker)," Applicant submits the alleged teaching of "to send values to a packet marker" does not teach or suggest "...to determine when marking of control packets is to be done." Applicant submits the cited portions of the cited reference do not disclose or suggest "...to determine when marking of control packets is to be done." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claim 23. Therefore, Applicant submits claim 23 is in condition for allowance.

Regarding claims 36, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claim 36. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein network element is further adapted to encapsulate the packets according to control encapsulation." While the Examiner cites "(paragraph 0215, Figure 25, wherein a packet containing an IP header)" in the Oguchi reference, Applicant submits the cited portions of the cited reference do not appear to disclose, as an example, "...according to control encapsulation." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claim 36. Therefore, Applicant submits claim 36 is in condition for allowance.

The Examiner has rejected claims 3 and 22 under 35 U.S.C. 103(a) as being unpatentable over McDysan (U.S. Patent Application Publication 2003/0112755 A1) in view of Oguchi (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 1 and 20 above, and further in view of Nakamichi et al (U.S. Patent Application Publication US 2002/0085498 A1). Applicant respectfully disagrees.

Regarding claims 3 and 22, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 3 and 22. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "...wherein the step of marking further comprises: marking the packets using a link-local MPLS label." While the Examiner states, "It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the link state advertisement disclosed in Nakamichi with the marker/policer disclosed in McDysan, as modified above, in order to allow a node in a communications network to collect traffic information and perform load sharing depending on traffic conditions," Applicant submits "to allow a node in a communications network to collect traffic information and perform load sharing depending on traffic conditions," Applicant submits such rationale would not have motivated one of ordinary skill in the art to combine the alleged teachings of the cited portions of the cited references so as to purportedly yield the subject matter of claims 3 and 22. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 3 and 22. Therefore, Applicant submits claims 3 and 22 are in condition for allowance.

The Examiner has rejected claims 5-12 and 24-31 under 35 U.S.C. § 103(a) as allegedly being unpatentable over McDysan et al. (U.S. Patent Application Publication 2003/0112755 A1) in view of Oguchi et al. (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 4 and 23 above, and further in view of Yu et al. (United States Patent Application Publication US 2004/0010583 A1). Applicant respectfully disagrees.

Regarding claims 5 and 24, Applicant submits the cited portions of the cited reference fail to render obvious the subject matter of claims 5 and 24. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups further comprises the step of: applying interface groups to packet communications within a particular interface group." While the Examiner cites "(Figure 1, interface group defined between interfaces 'a' and 'd' within network device A)," Applicant submits the block diagram of Figure 1 of the Yu et al. reference does not disclose, as an example, "...the step of: applying interface groups...." As another example, Applicant submits the block diagram of Figure 1 of the Yu et al. reference does not disclose "applying interface groups to packet communications within a particular interface group." Contrary to the Examiner's assertion, Applicant submits "Figure 1" does not appear to disclose "interface group defined between interfaces 'a' and 'd' within network device A." Thus, Applicant

submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 5 and 24. Therefore, Applicant submits claims 5 and 24 are in condition for allowance.

Regarding claims 6 and 25, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 6 and 25. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups to packet communications within a particular interface group further comprises the step of: applying interface groups to packet communications within a backbone interface group." While the Examiner cites "(Figure 4, static tunnel through Internet between network device A and network device B)," Applicant submits the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest, as an example, "...the step of: applying interface groups to packet communications within a backbone interface group." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 6 and 25. Therefore, Applicant submits claims 6 and 25 are in condition for allowance.

Regarding claims 7 and 26, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 7 and 26. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups to packet communications within a particular interface group further comprises the step of: applying interface groups to packet communications within a customer-specific interface group." While the Examiner cites "(Figure 4, interface 'a' between network device A and Host PC)," Applicant submits the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest "...the step of: applying interface groups to packet communications within a customer-specific interface group." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 7 and 26. Therefore, Applicant submits claims 7 and 26 are in condition for allowance.

Regarding claims 8 and 27, Applicant submits the cited portions of the cited references do not render obvious the subject matter of claims 8 and 27. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups to packet communications within a particular interface group further comprises the step of: applying interface groups to packet communications within a peer interface group." While the Examiner cites "(Figure 4, static tunnel between network device A and network device D)," Applicant

submits the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest "...the step of: applying interface groups to packet communications within a peer interface group." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 8 and 27. Therefore, Applicant submits claims 8 and 27 are in condition for allowance.

Regarding claims 9 and 28, Applicant submits the cited portions of the cited references do not render obvious the subject matter of claims 9 and 28. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups further comprises the step of: applying interface groups to packet communications between interface groups." While the Examiner cites "(Figure 4, connections between peer, backbone, and customer networks at network device A)," Applicant submits the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest "...the step of: applying interface groups to packet communications between interface groups." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 9 and 28. Therefore, Applicant submits claims 9 and 28 are in condition for allowance.

Regarding claims 10 and 29, Applicant submits the cited portions of the cited references do not render obvious the subject matter of claims 10 and 29. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups to packet communications between interface groups further comprises the step of: applying interface groups to packet communications between backbone and customer-specific interface groups." While the Examiner cites "(Figure 4, connections between peer, backbone, and customer networks at network device A)," Applicant submits the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest "...the step of: applying interface groups to packet communications between backbone and customer-specific interface groups." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 10 and 29. Therefore, Applicant submits claims 10 and 29 are in condition for allowance.

Regarding claims 11 and 30, Applicant submits the cited portions of the cited references do not render obvious the subject matter of claims 11 and 30. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups to packet communications between interface groups further comprises the step of: applying interface groups to packet communications between customer-specific and peer interface groups."

While the Examiner cites "(Figure 4, connections between peer, backbone, and customer networks at network device A)," Applicant submits the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest "...the step of: applying interface groups to packet communications between customer-specific and peer interface groups." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 11 and 30. Therefore, Applicant submits claims 11 and 30 are in condition for allowance.

Regarding claims 12 and 31, Applicant submits the cited portions of the cited references do not render obvious the subject matter of claims and 31. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups to packet communications between interface groups further comprises the step of: applying interface groups to packet communications between backbone and peer interface groups." While the Examiner cites "(Figure 4, connections between peer, backbone, and customer networks at network device A)," Applicant submits the block diagram of Figure 4 of the Yu et al. reference does not disclose or suggest "...the step of: applying interface groups to packet communications between backbone and peer interface groups." Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 12 and 31. Therefore, Applicant submits claims 12 and 31 are in condition for allowance.

The Examiner has rejected claims 13 and 32 under 35 U.S.C. § 103(a) as allegedly being unpatentable over McDysan et al. (U.S. Patent Application Publication 2003/0112755 A1) in view of Oguchi et al. (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 4 and 23 above, and further in view of Holden et al. (United States Patent No. 5,802,178). Applicant respectfully disagrees.

Regarding claims 13 and 32, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 13 and 32. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups further comprises the step of: applying interface groups to communication of ICMP packets." While the Examiner cites "(column 20, line 66 – column 21, line 10)," Applicant submits the cited portion of the Holden et al. reference does not disclose or suggest "...the step of: applying interface groups to communication of ICMP packets." Moreover, Applicant has presented arguments as to McDysan not disclosing the subject matter of claims from which claims 13 and 32 depend.

Accordingly, even if an attempt were made to combine the teachings of the Holden reference and the McDysan reference, such an attempted combination would not yield the subject matter of claims 13 and 32. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 13 and 32. Therefore, Applicant submits claims 13 and 32 are in condition for allowance.

The Examiner has rejected claims 14 and 33 under 35 U.S.C. § 103(a) as allegedly being unpatentable over McDysan et al. (U.S. Patent Application Publication 2003/0112755 A1) in view of Ogushi et al. (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 4 and 23 above, and further in view of Pan et al. (United States Patent 7,336,615). Applicant respectfully disagrees.

Regarding claims 14 and 33, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 14 and 33. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups further comprises the step of: applying interface groups to communication of ping packets." While the Examiner cites "(column 14, lines 48-55)" of the Pan reference, Applicant submits the cited portion of the Pan reference does not disclose or suggest "...the step of: applying interface groups...." Moreover, Applicant has presented arguments as to McDysan not disclosing the subject matter of claims from which claims 14 and 33 depend. Accordingly, even if an attempt were made to combine the teachings of the Pan reference and the McDysan reference, such an attempted combination would not yield the subject matter of claims 14 and 33. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 14 and 33. Therefore, Applicant submits claims 14 and 33 are in condition for allowance.

The Examiner has rejected claims 15 and 34 under 35 U.S.C. § 103(a) as allegedly being unpatentable over McDysan et al. (U.S. Patent No. 7,046,680) in view of Oguchi et al. (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 4 and 23 above, and further in view of Fotedar et al. (United States Patent Application Publication 2004/0085965 A1). Applicant respectfully disagrees.

Regarding claims 15 and 34, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 15 and 34. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface

groups further comprises the step of: applying interface groups to communication of traceroute packets." While the Examiner cites "(paragraph 0011)" of the Fotedar reference, Applicant submits the cited portion of the Fotedar reference does not disclose or suggest "...the step of: applying interface groups...." Moreover, Applicant has presented arguments as to McDysan not disclosing the subject matter of claims from which claims 15 and 34 depend. Accordingly, even if an attempt were made to combine the teachings of the Fotedar reference and the McDysan reference, such an attempted combination would not yield the subject matter of claims 15 and 34. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 15 and 34. Therefore, Applicant submits claims 15 and 34 are in condition for allowance.

The Examiner has rejected claims 16 and 35 under 35 U.S.C. § 103(a) as allegedly being unpatentable over McDysan et al. (U.S. Patent Application Publication 2003/0112755 A1) in view of Oguchi et al. (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 4 and 23 above, and further in view of Tuomenoksa et al. (United States Patent Application Publication 2002/0023210 A1). Applicant respectfully disagrees.

Regarding claims 16 and 35, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 16 and 35. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "wherein the step of applying interface groups further comprises the step of: applying interface groups to communication of packets from Network Operations Center (NOC) hosts." While the Examiner cites "(paragraph 0136)" and "(paragraphs 0141-0143)" of the Tuomenoksa reference, Applicant submits the cited portion of the Tuomenoksa reference does not disclose or suggest "...the step of: applying interface groups...." Moreover, Applicant has presented arguments as to McDysan not disclosing the subject matter of claims from which claims 16 and 35 depend. Accordingly, even if an attempt were made to combine the teachings of the Tuomenoksa reference and the McDysan reference, such an attempted combination would not yield the subject matter of claims 16 and 35. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 16 and 35. Therefore, Applicant submits claims 16 and 35 are in condition for allowance.

The Examiner has rejected claims 18 and 37 under 35 U.S.C. § 103(a) as allegedly being unpatentable over McDysan et al. (U.S. Patent Application Publication 2003/0112755 A1) in view of

Oguchi et al. (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 1 and 20 above, and further in view of Johansson (United States Patent 6,061,330). Applicant respectfully disagrees.

Oguchi et al. (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 1 and 20 above, and further in view of Johansson (United States Patent 6,061,330). Applicant respectfully disagrees.

Regarding claims 18 and 37, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 18 and 37. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "receiving unmarked control packets using rate-limited queues." While the Examiner cites "(Figure 1, 116; Figure 4a, 410)" of the Johansson reference, Applicant submits the Examiner does not allege the cited portion of the Johansson reference as disclosing or suggesting "receiving unmarked control packets using rate-limited queues." Rather, Applicant notes the Examiner alleges McDysan discloses "the unmarked control packets (i.e., packets received prior to being marked)" without citing any portion of the McDysan reference as allegedly teaching such subject matter. Moreover, Applicant has presented arguments as to McDysan not disclosing the subject matter of claims from which claims 18 and 37 depend. For example, Applicant submits McDysan fails to disclose "...control packets." Accordingly, even if an attempt were made to combine the teachings of the Johansson reference and the McDysan reference, such an attempted combination would not yield the subject matter of claims 18 and 37. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 18 and 37. Therefore, Applicant submits claims 18 and 37 are in condition for allowance.

The Examiner has rejected claims 19 and 38 under 35 U.S.C. § 103(a) as allegedly being unpatentable over McDysan et al. (U.S. Patent Application Publication 2003/0112755 A1) in view of Oguchi et al. (U.S. Patent Publication No. US 2002/0067725 A1) as applied to claims 1 and 20 above, and further in view of Hussey et al. (United States Patent Application Publication 2001/0049744 A1). Applicant respectfully disagrees.

Regarding claims 19 and 38, Applicant submits the cited portions of the cited references fail to render obvious the subject matter of claims 19 and 38. As an example, Applicant submits the cited portions of the cited references do not disclose or suggest "receiving the packets as received packets; and processing the received packets at a line rate." While the Examiner cites "(paragraph 0050)" of the Hussey reference, Applicant submits "(paragraph 0050)" of the Hussey reference states, in part, "...receives a packet data stream via the communication network 110 at a line rate...." Applicant submits such teaching does not disclose or suggest "receiving the packets as received packets" and "processing the received packets at a line rate." Moreover, Applicant has presented arguments as to

McDysan not disclosing the subject matter of claims from which claims 19 and 38 depend. Accordingly, even if an attempt were made to combine the teachings of the Hussey reference and the McDysan reference, such an attempted combination would not yield the subject matter of claims 19 and 38. Thus, Applicant submits the Examiner has not made a *prima facie* showing of obviousness with respect to claims 19 and 38. Therefore, Applicant submits claims 19 and 38 are in condition for allowance.

In conclusion, Applicant has overcome all of the Office's rejections, and early notice of allowance to this effect is earnestly solicited. If, for any reason, the Office is unable to allow the Application on the next Office Action, and believes a telephone interview would be helpful, the Examiner is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

12/08/2010
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Date

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